Frequency modulation system

*198. SHRI KALPNATH RAI: Will the Minister of INFORMATION AND BROADCASTING be pleased to state:

(a) what is frequency modulation system in respect of broadcast transmissions;

(b) the names of All India Radio Stations which have frequency modulation transmission facilities and what are their wavelengths;

(c) what are the advantages, of frequency modulation transmission over transmission on short-wave and medium wave;

(d) whether any special programmes are broadcast over frequency modulation transmission; and

(e) if so, the details thereof?

THE MINISTER OF PARLIAMENTARY AFFAIRS AND THE MINISTER OF INFORMATION AND BROADCASTING (SHRI H. K. L. BHAGAT): (a) to (e) In the frequecy modulation systems, the audio signals corresponding to speech or music are mixed with radio frequency carrier signal in such a way that the frequency of the carrier varies in accordance with the instantaneous amplitudes of the speech signal. The amplitude of the carrier wave remains unaltered during the process. Usually this mixing of the speech with carrier is done at the exciter stage of the FM transmitter and the resultant signal is amplified in terms of voltage and power before it is fed to the antenna which radiates this energy in the form of electro-magnetic wave. The electro-magnetic waves so generated are intercepted by the receiving antenna of the FM receiver which retries the orginal information (speech, music, etc.) by the process of demodulation.

Presently, frequency modulation transmission facilities are available from radio stations located at Bombay, Madras, Calcutta and Delhi. All the 4 transmitters are operating on 107.1 Mhz. corresponding to a wave-length of 2.8 metres.

There are several inherent advantages of FM transmission over transmission on SW and MW. Some of the salient features are;

(i) Large band width on transmission channel which gives it a high fidelity characteristic. Because of the large band width, stereo transmissions are possible on FM.

(ii) Interference free service and uniformity of coverage both during day and night time.

(iii) The same frequency of operation can be used for stations located 80 to 100 Km. apart.

(iv) It has better singal to noise ratio.

A beginning has been made to broadcast music programmes on FM from Delhi, Bombay, Calcutta and Madras. A beginning has also been made to broadcast stereo music from Delhi on FM for a duration of 1-1|2 hours from 9.30 PM to 11.00 PM each day.

अमेरिका से गेहूं का आयात

*199. **श्री रशीद मसूद :**

श्री सुब्रहमण्यन स्वामी :

क्या **खाद्य और नागरिक पूर्ति** मंत्री यह बताने की कृपा करेंगे कि :

(क) क्या यह सच है कि हाल ही में भारत ने अमेरिका से 1.2 मिलियन टन गेहूं का आयात किया है ;

(ख) यदि हां, तो इस खाद्यान्न के लिए भारत को अमेरिका को कितनी धन राशि देनी होगी और इसके भुगतान की शर्त क्या है; और

(ग) इस खाद्यान्न का आयात किए जाने के क्या कारण हैं ?

खाद्य और नागरिक पूर्ति मंत्रालय में राज्य मंत्री (श्री सुख राम) : (क) और (ग) बफर स्टाक को भरपाई करने की दृष्टि से संयुक्त राज्य अमेरिका से 10 लाख मीटरी टन गेहूं का आयात किया जाएगा ।

(ख) इस गेहूं को जहाज तक निष्प्रभार कुल लागत लगभग 1037.8 लाख अमरीकी डालर बैठती है । आपूर्तिकर्ताओं को भुगतान अप्रतिसंहरणीय ऋण पत्र द्वारा अमरीकी डालरों में किया जाना होगा ।

Plan for Papan Kalan Town around Delhi

*200. SHRI KRISHNA KUMAR BIRLA: Will the Minister of URBAN DEVELOPMENT be pleased to state:

(a) whether Government have formulated a plan for a new town Papan Kalan, at the periphery of the Urban limits of Delhi;

(b) if so, what are the details thereof;

(c) what is the likely impact thereof on the NCR Plan objectives to check migration to Delhi and also on the essential services and amenities in Delhi; and

(d) in what manner the objectives envisaged in the NCR plan would be achieved?

THE MINISTER OF URBAN DEVELOPMENT AND THE MINISTER OF TOURISM (SHRIMATI MOHSINA KIDWAI): (a) to (c) The DDA have formulated a plan for the Papan Kalan Project covering a total area of 3652 hect. including an area of 1688 hect of already built up areas. The plan conforms to the proposed urban extension and when fully developed is expected to accommodate a total population of about 7 lakhs. According to the projections of the Interim Development Plan of NCR which takes into consideration migration and balanced regional development, the urban population of Delhi would be 112 lakhs by 2001. The Papan Kalan Project forms part of the proposed urban extension to accommodate this projected population. The development of Papan Kalan envisages an integrated development in a phased manner, including essential services and other amenities.

(d) The main objective of the NCR Plan is to reduce the pressure on Delhi by developing the outer areas and bringing about a balanced development of the Region as a whole.

Production of Aluminium in the country

@1089. DR. MOHD. HASHIM KIDWAI: Will the Minister of STEEL AND MINES be pleased to state:

(a) what is the total production of aluminium in the country during the last three years;

(b) what is the quantam of aluminium exported to foreign countries alongwith the names of those countries, during the last three years; and

(c) what is the total amount of foreign exchange earned through the export of aluminium during the same period?

THE MINISTER OF STEEL AND MINES (SHRI MAKHAN LAL FOTEDAR): (a) Indigenous production of primary aluminium metal in the country during the last three years has been as under:—

1985-86	264,826 tonnes
1986-87	257,269 tonnes
1987-88	277,745 tonnes

(b) and (c) There is no export of primary aluminium metal except small quantity to Nepal under the Indo-Nepal Treaty on Trade. However, aluminium products are being exported to developed and developing countries. They include, among others, Bahrain, Kuwait, Saudi Arabia, United Arab Emirates, Bangladesh, Sri Lanka, Singapore, Australia, Federal Republic of Germany and United Kingdom. During the last three

@1089 Previously Unstarred Question 587, transferred from the 2nd May, 1988.